Dr. Surender Pratap
Assistant Professor

Contact Details: Department of Physics & Astronomical Science CUHP, Shahpur(Kangra), H.P

Academic Qualification: M.Sc(JMI New Delhi),Ph.D(BITS Pilani, Pilani campus), Postdoc(National Institute of science education and research)

Positions Held: Assistant Professor in Shri Mata Vaishno Devi University (3.8.2018-14.01.2020)

Specialisation: Theoretical Condensed Matter Physics

Research Interest: Anderson localization, Quantum chaos, Transport in 2-Dimensional materials, Quantum transport in atomistic scale.

Publications:

[1] Bhalla, P. and Surender Pratap. (2018). Aspects of electron transport in zigzag graphene nanoribbons. International Journal of Modern Physics B, 32(12):1850148.

[2] Surender Pratap (2016). Transport properties of zigzag graphene nanoribbons in the confined region of potential well,. Superlattices and Microstructures, 100.

[3] Surender Pratap (2017). Transmission and local density of states in case of zigzag graphene nanoribbons with and without magnetic field. Superlattices and Microstructures, 104(1):540 – 546.

[4] Surender Pratap and Sarkar, N. Application of the density matrix formalism for obtaining the channel density of a dual gate nano-scale ultra thin mosfet and its comparison with the semi-classical approach. International Journal of Nanoscience (World scientific), accepted for publication(02.01.2020).

[5] Surender Pratap and Sarkar, N. (2015).

Application of the self-consistent quantum method for simulating the size quantization effect in the channel of a nano-scale dual gate mosfet. AIP Conference Proceedings, 1665(1):120036

[6] Surender Pratap and Sarkar., N. (2016). Application of a self-consistent negf procedure to study the coherent transport with phase breaking scattering in low dimensional systems. AIP Conference Proceedings, 1724(1):020096.

[7] Surender Pratap and Sarkar, N. (2016). Studying the conductance and transport in low- dimensional graphene nano ribbon under ballistic regime. AIP Conference Proceedings, 1728:020267.

[8] Surender Pratap and Sarkar, N. (2019). Transport properties and sub-band modulation of the swcnt based nano-scale transistors. In Sharma, R. K. and Rawal, D., editors, The Physics of Semiconductor Devices, pages 155–162, Cham. Springer International Publishing.

Research Projects Completed/Ongoing:

None

M.Sc. students Supervised:

(1) Sahil Sharma (17MPY027) & Shivani Sharma (17MPY032)- Phase coherent transport in 2-terminal 1-D nanowires.

(2) Abhishek Jasrotia(17MPY001) & Sunakshi Sharma(17MPY038)- Transposrt properties of 1-Dimensional zigzag graphene nanoribbons.

Ph.D. Supervised:

None

Participation in Seminars/Conferences:

(1) DAE symposium held at VIT Chenai-2014.

(2) Indo US Symposium held at IIT Kanpur.

(3) Spintronics in 2-Dim. materials conducted by IIT Bombay.

	(4) CM days 2014 Calcutta University.
Membership of Learned Societies/ Professional Bodies:	
Awards & Honours Received:	Second position in lecture competition conducted by Department of Physics, Jamia Millia Islamia, New Delhi. JEST – 2010
Others:	NPTEL swayam course on Classical mechanics held by IIT Chenai successully completed